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10/518,411	12/17/2004	Toru Hibara	26460U	7754
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NATH & ASSOCIATES 112 South West Street Alexandria, VA 22314			EXAMINER NELSON, FREDA ANN	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/518,411

**Applicant(s)**

HIBARA ET AL.

**Examiner**

FREDA A. NELSON

**Art Unit**

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on May 6, 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The amendment received on May 6, 2008 is acknowledged and entered. Claims 4, 9, and 14 have been amended. No claims have been added. Claims 1-25 are currently pending.

### ***Response to Amendments and Arguments***

Applicant's arguments filed May 6, 2008 have been fully considered but they are not persuasive.

1. In response to Applicants argument that Maruta et al. does not disclose, teach, or suggest "calculating an area coverage by image forming material, printing cost information for each of the plurality of printing machines, and a print count of the image data", the Examiner respectfully disagrees. Maruta et al. disclose in the ACS determination process, the frequency ( $h2(n)$ ) corresponding to histogram 2 is subtracted from each frequency ( $h1(n)$ ) of histogram 1 to be set as histogram 3 ( $h3(n)$ ) wherein this histogram 3( $h3(n)$ ) corresponds to the chromatic color area of the document; and then the sum of the frequency in the gray scale range of b.sub.2 -b.sub.1 out of histogram 3 ( $h3(n)$ ) is obtained and substituted into  $C_n$  (refer to FIG. 5).  $C_n$  is a variable indicating the number of dots in the color region. The number of dots in the gray scale range of 0-255=total sum is obtained out of each frequency ( $h1(n)$ ) of histogram 1 and substituted into  $S_n$ .  $S_n$  is the sum of the total frequency of histogram 1=the total number of pixels in the document. In FIG. 5,  $W_n$  is the number of dots in the background (white) region of the document,  $M_n$  the number of dots in the halftone

(gray) region of black-and-white in the document, and Bn is the number of dots in the black region in the document (col. 8, lines 59-col. 9, line 8). Maruta et al. further disclose cost calculation is based on the type of document corresponding to the defined document size (large/small) *and ACS determination result (black-and-white/color)*, and *the number of documents* for each type (col. 9, lines 20-24; FIGS. 7A-10).

In response to Applicant's argument that Maruta et al is also silent with respect to the ability to calculate cost for "each of a plurality of printing machines", the Examiner respectfully disagrees. Maruta et al. disclose referring to FIG. 11, a printing system 1 of the second embodiment has user side data processors 5a, 5b, and 5c, a center side data processor 4, and copy machines 3a and 3b connected by a communication line 6 *wherein the number of user side data processors 5a, 5b, 5c and copy machines 3a, 3b is arbitrary*, and not limited to the number of the present embodiment (col. 11, lines 23-45); and each of user side data processors 5a, 5b, and 5c, and copy machines 3a and 3b have a similar structure and function. Therefore, only one thereof will be described hereinafter. In the following, "user side data processor 5" and "copy machine 3" refer to all or some of user side data processors 5a, 5b, 5c, and copy machines 3a and 3b, respectively (col. 11, lines 59-64). Maruta et al. further disclose according to the currently available electronic system such as electronic money or electronic banking, the payment of the cost for printing out image file TF can be settled through user side data processor 5 (col. 12, line 50-53).

***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> Paragraph***

Claims rejections under 35 USC § 112, 2<sup>nd</sup> Paragraph have been withdrawn due to the applicant's amendment.

***Drawings***

The drawings were received on May 6, 2008. These drawings are acceptable.

***Claim Objections***

2. Claim 14 is objected to because of the following informalities:

Claim 14, line 3, the "a" before "area" should be "an".

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-8, 10-13, and 15-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Maruta et al. (US Patent Number 6,516,157).**

As per claims 1, 8, 18, and 22, Maruta et al. discloses an information processing apparatus for transmitting inputted image data to a printing machine connected via an electronic network and making the printing machine execute printing, the information processing apparatus comprising:

a cost information register section for registering printing cost information for each of a plurality of printing machines connected via the electronic network (col. 11, lines 23-45; col. 11, lines 59-64; abstract);

an area coverage calculation section for calculating an area coverage by image forming material defined by an area of a print sheet covered with image forming material when printing the image data on the print sheet (col. 8, line 59-col. 9, line 8);

and a printing cost calculation section for calculating a printing cost for printing the image data, based on the area coverage by image forming material, printing cost information for each of the plurality of printing machines, and a print count of the image data (col. 9, lines 19-24).

**As per claims 2, 11, 19, and 23,** Maruta et al. discloses the information processing apparatus according to claim 1, further comprising:

a printing machine selection section which selects a printing machine of the minimum printing cost from among the printing cost of the plurality of printing machines calculated at the printing cost calculation section (col. 18, line 66-col. 19, line 6); and

an image transmission section which transmits the image data to the selected printing machine at the printing machine selection section via the electronic network (col. 18, line 66-col. 19, line 6).

**As per claims 3, 12, 20, and 24**, Maruta et al. discloses the information processing apparatus according to claim 1, wherein the printing cost calculation section calculates the printing cost for printing the image data for each of the plurality of printing machines connected via the electronic network, based on the area coverage by image forming material defined by the area of the print sheet covered with image forming material when printing the image data on the print sheet, printing cost information, the print count of the image data, and a print density of the image data (FIGS 23, 29, and 32).

**As per claims 4, 13, 21, and 25**, Maruta et al. discloses the information processing apparatus according to claim 1, wherein the area coverage calculation section comprises:

a sampling section sampling the image data at a predetermined sampling space (col. 7, lines 54-60; col. 8, lines 5-28; FIG. 4);

a binary coding section converting sampled image data obtained at the sampling section to binarized image data consisting of black pixels and white pixels (col. 8, lines 5-58);

a black pixel counting section counting black pixels of the binarized image data obtained at the binary coding section (col. 8, lines 5-58); and

a black pixel area calculation section calculating the area coverage by image forming material based on the number of black pixels counted at the black pixel counting section, the sampling space, and a resolution of the printing machine (col. 8, lines 5-58).

**As per claim 5**, Maruta et al. discloses the information processing apparatus according to claim 1, wherein the information processing apparatus is an image input apparatus transmitting the inputted image data from an image reading section to the printing machines connected via the electronic network (col. 13, lines 32-35; FIGS. 13 and 14).

**As per claim 6**, Maruta et al. discloses the information processing apparatus according to claim 1, wherein the information processing apparatus is a personal computer transmitting the inputted image data from an application program to the printing machine connected via the electronic network (FIGS. 11 and 12).

**As per claim 7**, Maruta et al. discloses the information processing apparatus according to claim 1, wherein the information processing apparatus is a server transmitting the inputted image data from an application program to the printing



machine connected via the electronic network (col. 25, lines 6-22).

**As per claim 10**, Maruta et al. discloses the recording medium according to claim 8, wherein the information processing program causes the calculated printing cost for each of the plurality of printing machines to be displayed on a display device (col. 2, line 66-col. 3, lines 19)

**As per claim 15**, Maruta et al. discloses the recording medium according to claim 8, wherein the information processing apparatus is an image input apparatus transmitting inputted image data from an image reading section to the printing machine connected via the electronic network (col. 13, lines 32-35; FIGS. 13 and 14); and wherein the information processing program is a firmware program of the image input apparatus (col. 12, line 57-col. 13, line 11).

**As per claim 16**, Maruta et al. discloses the recording medium according to claim 8, wherein the information processing apparatus is a personal computer transmitting the inputted image data from an application program to the printing machine connected via the electronic network (col. 25, lines 6-35); and wherein the information processing program is a virtual printer driver handing over the image data to a printer driver program for a selected printing machine (col. 12, line 66-col. 13, line 11).

**As per claim 17**, Maruta et al. discloses the recording medium according to claim 8, wherein the information processing apparatus is a server transmitting the inputted image data from the application program to the printing machine connected via the electronic network (col. 25, lines 6-35); and

wherein the information processing program is a virtual printer driver handing over the image data to the printer driver program for the selected printing machine (col. 12, line 66-col. 13, line 11).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**4. Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruta et al. (US Patent Number 6,516,157).**

**As per claim 9**, Maruta et al. do not expressly disclose the recording medium according to claim 8, wherein the printing cost calculation process calculates the printing cost with the parameters: "J" is a printing cost; "P<sub>master</sub>" is a unit price of a stencil sheet;

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" $P_{\text{print sheet}}$ " is a unit price of the print sheet; " $P_{\text{ink}}$ " is a unit price of image forming material;

" $S$ " is the area coverage by image forming material; and

" $N$ " is a print count, and with the equation,

$$J = P_{\text{master}} + (P_{\text{print sheet}} + P_{\text{ink}} \times S) \times N$$

However, it is old and well known in the printing industry to use a particular algorithm, calculation, expression, equations, or formula in order to calculate costs for performing printing jobs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Maruta et al. to include the feature of using parameters and equations for calculating the cost of a print job.

**As per claim 14**, Maruta et al. does not expressly disclose the recording medium according to claim 13, wherein the area coverage calculation process calculates the area coverage by image forming material of the image data with the parameters,

" $S$ " is a area coverage by image forming material;

" $A$ " is a print sheet area;

" $N_{\text{black-pixel}}$ " is number of black pixels;

" $R$ " is a resolution equivalent to that of the printing machine;

" $R1$ " is a resolution of the printing machine;

" $M$ " is a sampling space;

" $L$ " is a lateral length of the print sheet; and

"L2" is a lateral length of the print sheet, and with the equation

$$S = (A \times N_{\text{black-pixel}}) / (L1 \times L2 \times R^2) \\ = N_{\text{black-pixel}} \times (M/R1)^2$$

However, it is old and well known in the printing industry to use a particular algorithm, calculation, expression, equations, or formula in order to calculate costs for performing printing jobs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Maruta et al. to include the feature of using parameters and equations for calculating the cost of a print job.

#### **Examiner's Note**

Examiner cited particular pages, columns, paragraphs and/or line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

#### **Conclusion**

5. The examiner has cited prior art of interest, for example:

1) Minowa et al. (US PG Pub. 2002/0191039), which discloses ink consumption amount-calculating method and device, ink jet printer incorporating the device, printing cost-calculating system, and coloring material supply management system.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freda A. Nelson whose telephone number is (571) 272-7076. The examiner can normally be reached on Monday -Wednesday and Friday, 10:00 AM -6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. A. N./  
Examiner, Art Unit 3628

/JOHN W HAYES/  
Supervisory Patent Examiner, Art Unit 3628